



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/632,294	08/04/2000	Tal Isaac Lavian	10360-053001	1868

26181 7590 11/17/2004

FISH & RICHARDSON P.C.
3300 DAIN RAUSCHER PLAZA
MINNEAPOLIS, MN 55402

EXAMINER

DALENCOURT, YVES

ART UNIT	PAPER NUMBER
----------	--------------

2157

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/632,294

Applicant(s)

LAVIAN ET AL.

Examiner

Yves Dalencourt

Art Unit

2157

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 and 26-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26-30 is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is responsive to Response to Continued Examination (RCE) filed on 08/25/2004.

Response to Amendment

The examiner has acknowledged the amended specification. The rejection of claims 1 – 24 and 26 - 30 under 35 U.S.C. 112 first has been withdrawn.

Applicant's arguments filed on 02/03/04 have been fully considered but they are not persuasive.

Applicant asserted that Huang does not disclose extracting a subset of information from a non-object oriented MIB describing at least one aspect of a network device; generating a set of object-oriented classes and object-oriented methods corresponding to the subset of information in the non-object oriented MIB. In response, the examiner kindly disagrees with the preceding assertion. However, when read and analyzed in light of the specification, the invention as claimed does not support applicants' assertions. Applicant(s) is/ are reminded that 37 CFR 1.111(b) states, a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references does not comply with the requirements of this section. Huang, however, discloses a method and system to provide management information of network devices by mapping between SNMP MIB module schema and Common Information Model (CIM) schema. MIB modules are tree-structured lists of objects for describing SNMP network device information, whereas CIM schema employs user-intuitive, object-

oriented classes to model such information. A mapping process enumerates the MIB objects and then maps the objects into CIM Managed Object Format (MOF) classes using defined mapping tables. A correlation mechanism is further provided to efficiently determine in real time which MIBs (or portions thereof) and corresponding CIM classes a network device supports. In general, network device agents provide such management information via a standard known as the Simple Network Management Protocol (SNMP). In accordance with SNMP, the management component uses Management Information Bases (MIBs) to describe the structure of the data available at the network device. MIBs are published structures of static information that relate to the dynamic information provided by a network device. For example, a particular MIB might describe information such as an association between a device's data entity and a name (object identifier), a definition of the data type for that entity, a textual description of the entity, how the entity is indexed, if the entity is a member of a complex data type and the access allowed for that entity. The management component then is able to describe the data made available on the SNMP device (e.g., in response to a query or event) by using an appropriate MIB module to model that data. Applicant should duly note that the Common Information Model (CIM) disclosed by Huang is an object-oriented technology, wherein the components of CIM, such as classes, instances, and qualifiers may be conveniently described in a user-intuitive textual format known as Managed Object Format (MOF), (described below). A CIM object Manager (described below) preferably operates on information on CIM objects described via MOF. Huang discloses the use of mapping SNMP Management Information Base (MIB) objects to object classes,

particularly MOF-described object classes. To this end, the objects in a MIB are enumerated by a compiler process, and a determination is made for each enumerated object as to whether the MIB object corresponds to a scalar collection (one unique instance) or a table collection (multiple possible instances). If, the MIB object corresponds to a scalar collection, the MIB object is mapped to a singleton MOF class, such as by accessing a mapping table to translate the MIB object information to MOF class information. If the MIB object corresponds to a table collection, the MIB object information is mapped to a class capable of describing a plurality of instances, such as a keyed MOF object. Moreover, the objects are divided into what are most often called MOCs (Managed Object Classes), in which each MOC represents a type of resource. The MOCs define the information that the MIB will contain for each type of resource, i.e., what attributes the object will have. The MOCs can be interpreted as being part of the "schema" of the MIB. The manager records an object class MOC in the GDMO language, and it declares, among other things, the classes, and for each class, a list of attributes, name bindings, etc. This description is recorded in a GDMO object definition module attached to the manager ISM (41). Each MOC is instantiated in several MOIs (Managed Object Instances) representing the actual occurrences of this type of resource. However, the management information base (MIB) makes it possible to establish relationships between objects other than the relationships established in the containment tree by distinguished names. These relationships are established using relationship attributes. These attributes contain the global distinguished names (DN) of other objects. They are used as references from one object to another. Furthermore, all

incoming CMIP requests are translated to suitable database operations in an appropriate database language, for example, as structured query language ("SQL") queries. The following illustrates the SQL queries. Mapping to CMIP. The SQL "INSERT" command is translated to The CMIP "M-Create" command, the SQL "UPDATE" command is translated to the CMIP "M-SET" command, and the SQL "DELETE" command is translated to the CMIP "M-DELETE" command. Except for the "M-CREATE" request, the processing of a CMIP request for a managed object instance may result in that instance having to be loaded dynamically into the MOI cache. In this case, a "SELECT" command is used to retrieve the information from the database. It is important to note that the translated of a CMIP request into a database independent database operation is part of the runtime environment and is implemented in a manner that allows for support of any database. During execution, incoming CMIP requests are translated to a suitable database command. CMIP requests include "M-CREATE", "M-GET", "M-SET", "M-DELETE", "M-ACTION", and "M-CANCEL-GET." Therefore, Applicant(s) is/are reminded that the examiner is entitled to the broadest reasonable interpretation of the claims.

Applicants always have the opportunity to amend the claims during prosecution and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater 162 USPQ 541, 550-51 (CCPA 1969).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1 – 24 are rejected under 35 U.S.C. 102(e) as being anticipated by over Huang et al (U.S. 6,292,829; hereinafter Huang).

Huang discloses a heterogeneous network, which maintains two separate MIBs, wherein one is a relational, suited for use with SNMP management operations, while the other is object oriented and suited for use with CMIP management operations. In particular, Huang discloses the claimed features.

Regarding claims 1, 8, 14, and 22 – 24, Huang teaches a method and an apparatus of interfacing with network management information on a network device, which comprises the steps of receiving a non-object oriented management information database (MIB) at a compiler of a network device, the non-object oriented MIB including

information related to one or more aspects of the network device (figs. 5A-5B; col. 7, lines 54 – 59; col. 8, lines 18 – 29; Huang discloses receiving an SNMP PDU by network interface software 21); extracting a subset of information from the non-object oriented MIB describing at least one aspect of the network device (col. 7, lines 59 – 67; col. 8, lines 30 – 47; Huang discloses extracting the SNMP OidPrefix from the SNMP PDU); and generating a set of object-oriented classes and object-oriented methods corresponding to the subset of information in the non-object oriented MIB (col. 8, lines 11 – 17 and 48 - 64; col. 9, lines 34 – 55; Huang discloses an SNMP handler 40 that translates the SNMP operation contained in the SNMP PDU to an equivalent CMIP operation using the following translation in step S512).

Regarding claims 2, 4, 9, 10, 15 and 17, Huang et al teaches information in the non-object oriented MIB corresponds to a set of network parameters organized in a hierarchy and used to describe aspects of the network device and that the relationship among the object-oriented classes is a hierarchy that corresponds to the non-object oriented MIB (col. 6, lines 33 - 51).

Regarding claims 3 and 16, Huang et al teaches extracting information from the non-object oriented MIB further includes lexically recognizing a set of tokens corresponding to a set of network parameters that describes aspects of the network device and parsing the tokens according to a hierarchical relationship between the set of parameters (paragraph bridging col. 2, line 64 through col. 3, line 11); generating a set of object-oriented classes and object-oriented methods includes generating a set of object-oriented classes and object-oriented methods corresponding to the lexically

recognized and parsed tokens(col. 8, lines 11 - 64; col. 9, lines 34 – 55; Huang discloses an SNMP handler 40 that translates the SNMP operation contained in the SNMP PDU to an equivalent CMIP operation using the following translation in step S512).

Regarding claims 5, 11, and 18, Huang et al teaches the object-oriented methods generated include methods capable of accessing and manipulating objects instantiated from at least one of the object-oriented classes (col. 6 lines 10 - 14).

Regarding claims 6, 12, and 19, Huang et al teaches the object-oriented methods include one ore more of the operations used to operate on the MIB (col. 5, lines 42 - 45).

Regarding claims 7, 13, and 20, Huang et al teaches the operations used to operate on the MIB are selected from a group of operations including get, set, and test of SNMP (simple network management protocol) variables (col. 6, lines 30 - 32).

Regarding claim 21, Huang teaches an apparatus for interfacing with network management information on a network device, which comprises a first storage area configured to store a non-object oriented management information base (MIB) including information related to one or more aspects of a network device (col. 3, lines 30 – 34; col. 8, lines 18 – 18 – 25; Huang discloses a first storage to store the SNMP PDUs received); and a second storage area configured to store a set of object-oriented classes and object-oriented methods that corresponds to the non-object oriented MIB and information related to one or more aspects of the network device (col. 3, lines 34 –

Art Unit: 2157

38; col. 8, lines 1 – 17; Huang discloses a second storage to store the CMIP PDUs received).

Allowable Subject Matter

Claims 26 – 30 are allowed.

The reasons for the indication of allowable subject matter will be provided in the next office action.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Victor Villalpando (US Patent Number 6,219,718) discloses an apparatus for generating and transferring managed device description file.

Foley et al (US Patent Number 6,487,590) discloses a method for controlling a network element from a remote workstation.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yves Dalencourt whose telephone number is (571) 272-3998. The examiner can normally be reached on M-TH 7:30AM - 6: 30PM.


Art Unit: 2157

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Yves Dalencourt


November 09, 2004


ARIO ETIENNE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100